STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0124451; AI 158419; PER20080001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** St. Tammany Parish Government
University Square Wastewater Treatment Plant
P.O. Box 628
Covington, LA 70434

II. **PREPARED BY:** Angela Marse

DATE PREPARED: March 2, 2009

III. **PERMIT ACTION:** LPDES permit LA0124451, AI 158419; PER20080001

LPDES application received: June 6, 2008

LPDES permit issued: none issued

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the University Square Development.

B. The permit application does not indicate the receipt of industrial wastewater.

C. The facility will be located off La. Hwy. 434, north of I-12 near Lacombe, St. Tammany Parish.

D. The treatment facility will consist of an activated sludge plant with a clarifier and mechanical filter. Disinfection is by chlorination.

E. Outfall 001

Discharge Location:	Latitude 30° 21' 46" North Longitude 89° 53' 59" West	
Description:	treated sanitary wastewater	
Design Capacity:	Phase I	0.3 MGD
	Phase II	0.6 MGD

Type of Flow Measurement which is required: Continuous Recorder

V. RECEIVING WATERS:

The discharge is by pipe into Big Branch Bayou, thence into Bayou Lacombe, thence into Lake Pontchartrain in segment 040902 of the Lake Pontchartrain Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 040902 of the Lake Pontchartrain Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment 040902	Degree of Support of Each Use						
Partially Supported	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Full	Not Supported	Full	N/A	N/A	N/A

[1/]The designated uses and degree of support for Segment 040902 of the Lake Pontchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

Section 303 (d) of the Clean Water Act as amended by the Water Quality Act of 1987, and EPA's regulations at 40 CFR 130 require that each state identify those waters within its boundaries not meeting water quality standards. The Clean Water Act further requires states to implement plans to address impairments. LDEQ is developing Total Maximum Daily Loadings Studies (TMDLs) to address impaired waterbodies. Segment 040902 of the Lake Pontchartrain Basin is on the 2006 Integrated 303(d) List of Impaired Waterbodies. The suspected causes of impairment are dissolved oxygen, chlorides, pathogen indicators, low pH, sulfates, and total dissolved solids. To date no TMDLs have been completed for this waterbody.

Until completion of the TMDLs for the Lake Pontchartrain Basin, suspected causes of impairment which are not directly attributed to sanitary wastewater point sources have been eliminated in the formulation of effluent limitations and other requirements of this permit. These include chlorides, sulfates, and total dissolved solids. This determination is made through best professional judgment. These impairments are attributed to drought conditions and these pollutants are not typically present in sanitary wastewater based upon EPA's determination of patterns in the incidence of pollutants present in sanitary wastewater (EPA's Proposed Rule of December 6, 1995).

Suspected causes of concern remaining after the elimination process are addressed in a manner consistent with the Department's permitting guidance for implementing Louisiana's surface water quality standards as follows:

Dissolved oxygen
Carbonaceous biochemical oxygen demand (or CBOD) is the amount of oxygen required by bacteria to oxidize biological degradable material (normally organic matter) found in wastewater, effluents, and polluted waters. The test measures the amount of oxygen consumed in a sample by naturally occurring bacteria over a five-day period. Therefore, to protect against potential discharges resulting in DO levels below that of state water quality standards for the receiving waterbody, $CBOD_5$ limits have been placed in the permit. Monitoring for biological oxygen demand is the best indicator by which to measure the potential discharge of oxygen consuming pollutants at levels that will result in dissolved oxygen below that of state water quality standards. In addition, dissolved oxygen will also be monitored at the outfall.

Pathogen Indicators
Monitoring for fecal coliform is the best indicator to determine the potential presence of pathogenic organisms in wastewater. To protect against potential receiving water impairments due to pathogens, fecal coliform limits have been established in the permit. Permit limits are reflective of the most stringent water quality standards based on the designated use of the receiving stream (primary contact recreation).

Low pH
This impairment is not attributed to sanitary wastewater discharges. It is attributed to naturally occurring organic acids. Nonetheless, according to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., pH have been placed in the permit.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 040902 of the Lake Pontchartrain Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the *West Indian manatee* and the *Gulf sturgeon*, which are listed as a threatened/endangered species. This draft permit has been sent to the FWS for review, as set forth in the Memorandum of Understanding between the LDEQ and the FWS. LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse affect upon either the *West Indian manatee* or the *Gulf sturgeon* since effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge will be from a new facility. LDEQ has consulted with the State Historic Preservation Officer (SHPO) in a letter dated 1/14/2009 to determine whether construction-related activities could potentially affect sites or properties on or eligible for listing on the National Register of Historic Places. SHPO's response, dated 02/06/09 stated that the facility as proposed will have no potential effects.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation
Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mrs. Angela Marse
Water Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Interim Effluent Limits:

OUTFALL 001

The proposed treatment facility will serve the University Square Development. As discussed in Section V., designated uses of the receiving stream are primary contact recreation, secondary contact recreation, the propagation of fish and wildlife, and outstanding natural resource waterbody. The designation outstanding natural resource waterbody applies only to Bayou Lacombe, the named waterbody and not its tributaries as per LAC33:IX.1111.A. Based on the 2006 Water Quality Management Plan Bayou Lacombe fully supports the outstanding natural resource designated use. Bayou Lacombe will continue to this use because the discharge will travel Big Branch Bayou over 15 miles before entering Bayou Lacombe. Furthermore, wastewater treatment will be provided to meet effluent limitations set in accordance with the Areawide Policy for St. Tammany Parish for facilities of this size. Specifically, these effluent limits include $CBOD_5$ and dissolved oxygen limits to ensure the discharge does not contribute to the low dissolved oxygen impairment and fecal coliform effluent limits based on primary contact recreation due to the pathogen impairment. Because, TMDLs have not been done for the Lake Pontchartrain Basin, a reopener clause has been included in the permit should more stringent effluent limits be necessary as a result of future TMDLs.

Interim effluent limits are for the Phase I development with a design capacity of 0.3 MGD. Interim limits shall become effective on the effective date of the permit and expire upon completion of Phase II construction.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	25	10 mg/l	15 mg/l	Limits are set in accordance with the St. Tammany Parish Areawide Policy for facilities of this treatment type and size.
TSS	37.5	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen	12.5	5 mg/l	10 mg/l	Limits are set in accordance with the St. Tammany Parish Areawide Policy for facilities of this treatment type and size.
Dissolved Oxygen	N/A	5 mg/l	N/A	Limits are based on water quality impairments and set in accordance with the St. Tammany Parish Areawide Policy for facilities of this treatment type and size.

**This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgment in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) **pH**

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

Final Effluent Limits:

Final effluent limits are for the Phase II development with a design capacity of 0.6 MGD. Final limits shall become effective upon completion of Phase II construction and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	50	10 mg/l	15 mg/l	Limits are set in accordance with the St. Tammany Parish Areawide Policy for facilities of this treatment type and size.
TSS	75	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen	25	5 mg/l	10 mg/l	Limits are set in accordance with the St. Tammany Parish Areawide Policy for facilities of this treatment type and size.
Dissolved Oxygen	N/A	5 mg/l	N/A	Limits are based on water quality impairments and set in accordance with the St. Tammany Parish Areawide Policy for facilities of this treatment type and size.

**This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgment in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0124451: none issued

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

This is a new facility. No inspections have been performed for this facility.

B) Compliance and/or Administrative Orders

Because this is a new LPDES permit, no formal compliance history exists for this facility. However, the applicant owns and/or operates similar facilities in Louisiana. Some of the facilities operated by the applicant have been under review or formal enforcement action by the Department. The Department has determined that the applicant's history of environmental violations will be adequately addressed by the effluent limitations and permit conditions contained within the permit. Once issued, any violations of the permit will be subject to further enforcement actions.

C) DMR Review

There are no DMRs on file. This is a new facility.

XII. ADDITIONAL INFORMATION:

This permit may be modified, or alternatively, revoke and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs; if the effluent standard, limitations, water quality studies or TMDLs so issued or approved;

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.6 MGD.

Effluent loadings are calculated using the following example:

CBOD: 8.34 lb/gal x 0.6 MGD x 10 mg/l = 50 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit for interim effluent limits are standard for facilities of flows between **0.1** and **0.5** MGD. **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit for final effluent limits are standard for facilities of flows between **0.5** and **1.0** MGD.

Pretreatment Requirements

Based upon the application and consultation with LDEQ pretreatment personnel, standard pretreatment language has been included in the permit.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 2006.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2008.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2008.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, St. Tammany Parish, University Square, June 6, 2008.